

*CLAIM AMENDMENTS*

1. (Currently Amended) A photoelectric encoder for detecting a movement amount of an object, comprising:

a scale that generates a ~~periodical~~ periodic light-intensity distribution pattern having a ~~predetermined~~ pitch P ~~with irradiation~~ upon radiation of emission light from a light source; and

a plurality of ~~light-receiving~~ light-detecting segment groups that are shifted relative to said scale to generate phase signals having ~~predetermined~~ fixed phase differences so that the movement amount is detected based on the phase signals with the ~~predetermined~~ fixed phase differences, wherein a plurality of ~~light-receiving~~ light-detecting segments are positioned to have the same phase ~~to form~~ as each of said plurality of ~~light-receiving~~ light-detecting segment groups, ~~which includes~~ each group including at least two of said plurality of ~~light-receiving~~ light-detecting segments adjacent to each other.

2. (Currently Amended) The photoelectric encoder according to claim 1, wherein said ~~light-receiving~~ light-detecting segment groups have ~~predetermined~~ fixed phase differences, and ~~area~~ centers of gravity, on a phase axis, of said plurality of ~~areas of the~~ light-receiving light-detecting segment groups having a ~~predetermined~~ fixed relationship in phase difference to each other, are ~~made~~ coincident with each other.

3. (Currently Amended) The photoelectric encoder according to claim 1, wherein said ~~light-receiving~~ light-detecting segment groups have ~~predetermined~~ fixed phase differences, and ~~area~~ centers of gravity on a phase axis, of ~~areas of~~ said plurality of the ~~light-receiving~~ light-detecting segment groups having a ~~predetermined~~ fixed relationship in phase difference to each other, are arranged symmetrically in position with respect to a center axis of the ~~emission~~ light-intensity distribution pattern.

4. (Currently Amended) The photoelectric encoder according to claim 1, wherein a center distance between ~~the~~ center positions of the ~~adjacent~~ light-receiving light-detecting segments located adjacent to each other and having the same phase is equal to the pitch P, and a center distance between ~~the~~ center positions of the ~~adjacent~~ light-receiving light-detecting segments located adjacent to each other and located at the respective ends of different light-emitting segment groups having different phases is equal to  $5P/4$ .

In re Appln. of OHMURA et al.  
Application No. Unassigned

5. (Currently Amended) The photoelectric encoder according to claim 1, ~~wherein~~ including, in said ~~light-receiving~~ light-detecting segment groups, a cross-talk preventive portion ~~is integrally formed~~ located in the spaces between the respective ~~adjacent light-receiving~~ light-detecting segments located adjacent to each other.

6. (Currently Amended) The photoelectric encoder according to claim 5, wherein said cross-talk preventive portion ~~is formed of~~ a vapor-deposition film member.

7. (Currently Amended) The photoelectric encoder according to claim 5, wherein said cross-talk preventive portion ~~is formed of~~ a signal-light shielding member formed by etching.

8. (Currently Amended) The photoelectric encoder according to claim 1, ~~wherein~~ ~~the number~~ including form of said ~~light-receiving~~ light-detecting segment groups ~~are four~~ that respectively correspond to ~~generate~~ four phase signals, and, when using one of the four phases as a reference phase, the phases of the other three signals are set to 90°, 180° and 270°.

9. (Currently Amended) The photoelectric encoder according to claim 1, wherein ~~a~~ width of each ~~light-receiving~~ light-detecting segment is set to approximately 1/2 of the ~~predetermined~~ pitch P.